

APRIL/MAY 2025

**FMB52/CMB52 — AGRICULTURAL AND
ENVIRONMENTAL MICROBIOLOGY**

Time : Three hours

Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL questions.

1. What is cation exchange capacity of soil?
2. List out the factors affects the soil color.
3. Define denitrification.
4. What is humus?
5. Differentiate parasitism and predation.
6. What are root exudates?
7. Define fumigation.
8. What is droplet nuclei?
9. Define limnology.
10. What is sludge conditioning?



SECTION B — (5 × 5 = 25 marks)

Answer ALL questions.

11. (a) Write a note on soil structure.

Or

- (b) What are the factors affect soil pH? Explain briefly.

12. (a) Briefly explain phosphorus cycle.

Or

- (b) Write short note on *Bacillus thuringiensis* as biocontrol agent.

13. (a) Give detail about Rhizosphere.

Or

- (b) Comment on citrus canker.

14. (a) List out the various sources of microorganisms in air.

Or

- (b) Illustrate briefly about various agents used in air sanitation.

15. (a) Summarize biotic and abiotic characteristics of Estuary.

Or

- (b) Describe important bacterial diseases spread through waterborne mode.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Elaborate various physical properties of soil.
17. Illustrate carbon cycle with neat diagram.
18. Discuss about various interactions among soil microbes. Give example for each.
19. Give a detailed note on important airborne diseases.
20. Explain in detail about methods employed for waste water treatment.

